



REASSESSMENT OF THE RESPONSES TO AVIATION SAFETY RECOMMENDATION A03-09

ACCIDENT INVESTIGATION ISSUES: IMAGE (VIDEO) RECORDING

Background

On 02 September 1998, Swissair Flight 111, a McDonnell Douglas MD-11 aircraft, departed John F. Kennedy Airport in New York, New York, en route to Geneva, Switzerland. Approximately one hour after take-off, the crew diverted the flight to Halifax, Nova Scotia, because of smoke in the cockpit. While the aircraft was manoeuvring in preparation for landing in Halifax, it struck the water near Peggy's Cove, Nova Scotia, fatally injuring all 229 occupants on board. The investigation revealed that the flight crew had lost control of the aircraft as a result of a fire in the aircraft's ceiling area, forward and aft of the cockpit bulkhead.

The Board concluded its investigation and released report A98H0003 on 27 March 2003.

Board Recommendation A03-09 (27 March 2003)

The TSB is acutely aware of the concerns expressed by industry associations that sensitive recordings will be inappropriately released to the public or used for purposes other than safety investigation. While Canada treats these recordings as privileged, all nations do not. If image recordings are to be universally accepted, worldwide protections need to be put in place for all cockpit voice and image recordings. These protections would allow investigation authorities to use the recordings for safety purposes while preventing them from being aired for other purposes. Therefore, the TSB recommended that:

Regulatory authorities harmonize international rules and processes for the protection of cockpit voice and image recordings used for safety investigations.

A03-09

Response to A03-09 (16 June 2003)

In response to Recommendation A03-09, Transport Canada (TC) provided the following comments:

- TC agrees that all cockpit voice and image recordings used for safety investigations should be protected.
- TC believes that the appropriate forum to gain the necessary international agreement and harmonized implementation of this recommendation is the International Civil Aviation Organization (ICAO).

- TC will bring this recommendation to the attention of ICAO through Canada's representative.

Board Assessment of the Response to A03-09 (29 October 2003)

TC's response details actions that, if fully implemented, will satisfy the aim of Recommendation A03-09. Consequently, the response is assessed as **Satisfactory Intent**.

Next TSB Action (29 October 2003)

The TSB Air Branch will monitor TC's initiatives to bring this recommendation to the attention of ICAO.

Response to A03-09 (14 December 2005)

In its activity update of 14 December 2005, TC states that the protection of cockpit voice information in Canada falls within the purview of the *Canadian Transportation Accident Investigation and Safety Board Act* and its associated regulations. ICAO Annex 13, chapter 5, requires that member states comply with strict guidelines regarding the disclosure of evidence. Canada has formally notified conformance with this provision to ICAO as documented in the supplement to Annex 13.

Future rulemaking activity will be contingent on internationally harmonized requirements.

Board Reassessment of the Response to A03-09 (12 July 2006)

TC's original response of 13 June 2003 stated that it would bring the recommendation to the attention of ICAO through Canada's representative. While TC's update of 14 December 2005 states that future rulemaking activity will be contingent on international requirements, it does not indicate that it has raised the deficiency identified in Recommendation A03-09 with Canada's representative at ICAO. It is the Board's understanding that TC remains committed to its original action plan, which, if fully implemented, will substantially reduce the risks associated with Recommendation A03-09.

Therefore, the assessment remains at **Satisfactory Intent**.

Next TSB Action (12 July 2006)

As a follow-up, TSB staff will liaise with TC to clarify the status of its initial action plan.

Response to A03-09 (07 February 2007)

TC's response reiterates its position as stated in its 14 December 2005 update to TSB.

Board Reassessment of the Response to A03-09 (24 July 2007)

TC's original response of 13 June 2003 stated that it would bring the recommendation to the attention of ICAO through Canada's representative. Although TC's response does not provide any update on its original action plan, the Board believes that TC remains committed to its original action plan, which, if fully implemented, will substantially reduce the risks associated with Recommendation A03-09.

Therefore, the assessment remains at **Satisfactory Intent**.

Next TSB Action (24 July 2007)

TC has never provided confirmation that it has raised the deficiency identified in Recommendation A03-09 with Canada's representative at ICAO. The Director of Investigations, Air will seek written confirmation from TC that it has either implemented, or altered, its original plan as stated in the Minister's original response dated 13 June 2003.

Response to A03-09 (06 March 2008)

TC states that the protection of cockpit voice information in Canada falls within the purview of the *Canadian Transportation Accident Investigation and Safety Board Act* and its associated regulations. TC assumes that this recommendation is intended for other jurisdictions as Canada conforms to ICAO Annex 13, Chapter 5 that requires member states to comply with strict guidelines regarding the disclosure of evidence.

TC also states that future TC rule marking activity would be contingent on internationally harmonized requirements and suggests this deficiency file be closed.

Board Reassessment of the Response to A03-09 (13 August 2008)

TC has indicated full support for the protection for cockpit voice and image recordings and will participate with the TSB representing Canada at the upcoming ICAO Accident Investigation and Prevention (AIG) Divisional Meeting 2008, which will attempt to establish harmonization of the international rules regarding for such recordings.

The planned action when fully implemented will substantially reduce or eliminate the safety deficiency.

Therefore, the assessment remains at **Satisfactory Intent**.

Next TSB Action (13 August 2008)

TSB Air Branch staff will monitor the progress and results of the ICAO AIG 2008 meeting, which will be held in October 2008.

Update to A03-09 (29 October 2008)

ICAO's Accident Investigation and Prevention Divisional Meeting took place 13 to 18 October 2008. The delegation from France, on behalf of the European Community and its Member States, presented working paper 32 that identified omissions in Annex 13, Ninth Edition, Amendment 11, with regard to the non-disclosure of recordings made by Airborne Image Recorders. Consequently, the meeting recommended that Chapter 5, paragraph 5.12 be amended to include: f) airborne image recordings and any part or transcripts from such recordings.

The meeting also noted a concern regarding methods of protection of image recordings from disclosure in those States which were unable or unwilling to afford such protection in their national legislation.

Board Reassessment of the Update to A03-09 (19 November 2008)

Once approved by ICAO, the amendment to Annex 13, paragraph 5.12 as recommended by ICAO's Accident Investigation and Prevention Divisional Meeting implies that each Contracting State that does not file a difference to this amendment will provide image recordings the same protection currently afforded to cockpit voice recordings during their accident and incident investigations.

The Board believes that ICAO, through this amendment has provided the required guidance to Contracting States concerning the protection of image recordings and hence brings a degree of uniformity to the changes in national legislation.

The planned action when fully implemented will substantially reduce or eliminate the safety deficiency. Therefore, the assessment remains at **Satisfactory Intent**.

Next TSB Action (19 November 2008)

TSB Air Branch staff will monitor the progress of ICAO's approval of the AIG's recommendation to amend Annex 13, paragraph 5.12.

FAA Response to A03-09 (06 January 2010)

The FAA response provided an update with respect to its activity related to TSB Recommendation A03-09. The FAA has been participating on an international workgroup (EUROCAE WG50) which has just completed work on ED112 entitled *Minimum Operational Performance Specification for Crash Protected Airborne Recorder Systems*. This document defines the performance specifications for all flight recorders including image recorders. Several issues make promulgating a regulation requiring the installation of a camera in the cockpit a challenge, including concerns about the use of the recordings for other than accident investigation purposes.

Board Reassessment of the Response to A03-09 (28 July 2010)

The Board appreciates the FAA's update. As a consequence of its work in helping to develop the EUROCAE ED112 document, the FAA has gained an appreciation for the potential misuse of image recordings. However, the response does not include any information to indicate whether or not the FAA supports harmonization of international rules and processes for the protection of cockpit voice and image recordings.

Its latest response indicates that FAA action plan, if fully implemented, will substantially reduce the risks associated with Recommendation A03-09. However, for the present, the action has not been sufficiently advanced to reduce the risks to transportation safety.

Consequently, the assessment remains as **Satisfactory Intent**.

Next TSB Action (28 July 2010)

TSB staff will monitor the FAA's initiatives to harmonize international rules and processes for the protection of cockpit voice and image recordings used for safety investigations.

ICAO Activity Update to A03-09 (09 April 2010)

TSB has been advised that the ICAO AIG recommendation to amend Annex 13 Chapter 5, paragraph 5.12 to include reference to cockpit image recordings has been included in Draft Amendment 13 to Annex 13. Subsequently, ICAO's Draft Amendment 13 to Annex 13 has been issued as a state letter (AN 6/1.1-10/26 dated 29 March 2010) for review and comment by Contracting States.

Board Assessment of ICAO Activity Update to A03-09 (28 July 2010)

Once ratified by Contracting States, Amendment 13 to Annex 13, paragraph 5.12 will provide image recordings the same protection currently afforded to cockpit voice recordings during their accident and incident investigations.

The planned action, when fully implemented, will substantially reduce or eliminate the safety deficiency. Therefore, the assessment remains at **Satisfactory Intent**.

Next TSB Action (28 July 2010)

TSB Air Branch staff will monitor the progress of ICAO implementation of Amendment 13 of Annex 13.

Update to ICAO Activity re A03-09 (July 2010)

ICAO, in its Amendment 13 to Annex 13 *Aircraft Accident and Incident Investigation* dated July 2010, has amended paragraph 5.12 *Non-disclosure of Records* to include protection of image recorders.

Specifically, paragraph 5.12 *Non-disclosure of Records*, which declares that the State conducting the investigation of an accident or incident shall not make certain records available for purposes other than accident or incident investigation, has been amended to include the following:

- e) recordings and transcriptions of recordings from air traffic control units;
- f) cockpit airborne image recordings and any part or transcripts from such recordings.

Board Reassessment of the Response to A03-09 (09 March 2011)

While Canada treats these records as privileged, other nations do not. ICAO's amendments to paragraph 5.12 *Non-disclosure of Records* to include image recordings and associated transcripts will help protect against the use of such information for purposes other than occurrence investigation. However, as before, contracting states can still allow disclosure of such records for the administration of justice in that state.

The inclusion of image recordings in paragraph 5.12 provides the framework by which contracting states can ensure that their respective national legal protocols are designed to protect such information. The action taken by ICAO and its contracting states will substantially reduce or eliminate the safety deficiency associated with Recommendation A03-09.

Therefore, the assessment is changed to **Fully Satisfactory**.

Next TSB Action (09 March 2011)

As further action is unwarranted, the Board changes the deficiency file status to **Inactive**.